



## Itch Mites

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This Gardennote is about skin itching on people caused by bites from species of itch mite. It does not include information on the scabies mite or allergic reactions from the faeces, dried bodies and skin casts of the European house dust mite or any other mite species.

Itch mites are a problem when dried foodstuffs (such as fruits, seeds, cereal products, and pet food) infested with the larvae of storage insects are placed in warm, humid environments. The mites are also a common problem in haystacks that are exposed to rain-bearing winds in warm situations. Under these conditions large numbers of itch mites develop. Although the mites are primarily predators of soft-bodied insect larvae, they will also attack people and many domestic animals that come into contact with the infested material.

### Biology of itch mites

The developmental stages of itch mites are egg, larvae, nymph, and adult. The life cycle usually takes two to four weeks but this depends on the mite species and weather. Female mites can lay 200 to 300 eggs. Itch mites are extremely small, normally being only 0.2 mm long, but a female engorged with eggs can reach 2 mm.

The major hosts of itch mites are the larvae of several stored product pests such as the Angoumois grain moth, the saw-toothed grain beetle, the pea weevil, and the cowpea weevil.

### The symptoms of itch mite bites

Itch mites are related to spiders and inject venom when they bite. They do not discern between insects and humans.

Mites bite the covered areas of the human body, especially the waist, underarms and the inside leg, but do not bore into the skin like the scabies mite. The bites will cause an allergic reaction on the skin in most people, characterised by a red weal with a central blister. This is accompanied by a severe itching sensation. Rubbing or scratching of the affected area will burst the blister and promote the possibility of secondary infections and other problems including dermatitis.

After contact with infested produce, skin irritations may develop. These may be caused by an allergic response



Figure 1. *Pyemotes tritici* straw itch mite (Photo by Eric Erbe; digital colourization by Chris Pooley, USDA)



Figure 2. Severe case of itch mite bites

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to the produce, but in many cases the small itchy welts or sores that develop are a symptom of a condition commonly known as hay or chaff itch, which is caused by the venom of the itch mites.

Itch mites do not breed on mammals, and if infested produce is avoided for several days the condition will subside.

## Treatment of itch mite bites

If you think you have been attacked by itch mites, remove the infested clothing and shower before putting on clean clothing.

When the welts appear, try not to scratch them. Seek medical advice, because the symptoms can be reduced, and prompt action will decrease the likelihood of skin infections or dermatitis.

In severe cases of mite attack, victims have also reported headache, fever, nausea, vomiting, mild diarrhoea, and joint pains. Do not feel embarrassed about seeking medical advice to cure the problem — itch mites have been biting humans since long before we stopped using straw as mattress filler.

## Prevention and control of itch mites

The best way to avoid an attack from itch mites is to prevent the mite population from developing in the first place. Keep the stored food free of insects by either oven-drying it, or by storing it at temperatures below 15°C to minimise the development of host larvae.

Horse owners should be aware that hay bales may be infected with itch mites, especially after rain-bearing summer storms. Use protective gear before handling hay and apply a personal insect repellent to wrists, ankles, neck, and waistline before entering the infested area. The repellent should contain at least 50 per cent of the active constituents as diethyltoluamide (DEET), (such as Rid® or Aerogard®: follow label instruction). This will greatly reduce the likelihood of receiving mite bites.

Small amounts of infested produce can be heated to 60°C in an oven and held at this temperature for one hour, or microwaved on a low setting for five minutes to kill the mites and their hosts. Larger quantities of infested produce will need to be fumigated in a chamber with methyl bromide or aluminium phosphide by a licensed operator. If the produce is heavily infested with stored product pests and itch mites, it may be simpler to burn or dump the offending material.

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